

**Notice of Allowability**

Application No.

09/727,327

Applicant(s)

MACCORMACK, MARIAN  
MONTEQUINFELA

Examiner

Tuan A Vu

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/1/2004.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☒ The drawings filed on 29 November 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### DETAILED ACTION

1. This action is responsive to the Applicant's response filed 9/01/2004.

As indicated in Applicant's response, claims 1, 7, 9-11, 15, 17, 19-21 have been amended. Claims 1-21 are pending in the office action.

### EXAMINER'S AMENDMENT

2. In view of the direction in which some of the independent claims have been amended to replace broad limitations with more specific limitations so to help the invention distinguish over the prior art, some previously recited limitations (e.g. "additional information") which are supposed to be have been removed are found to remain in the above claims. This appears to have been inadvertent typographical errors by Applicant and these necessitate some correction. The following Examiner's amendment is purported to the removing such limitations in order to expedite the allowance of the now amended claims by obviating another USC 112, 2<sup>nd</sup> paragraph type of rejection.

The application has been amended as follows:

**Claim 11**, lines 10-14,

"... a disassembler module for disassembling said program instructions received from said instruction reader to generate source code and for deriving from said relocation instruction the expressions/values of the original object code sequence lost due to the link time modification, wherein said source code ~~and said additional information~~ can be displayed in human readable form."

**Claim 21**, lines 11-15,

“... a disassembler module for disassembling said program instructions received from said instruction reader to generate source code and for deriving from said relocation instruction type the original object code sequence expressions/values, wherein said source code ~~and said additional information~~ can be displayed in human readable form.”

***EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE***

3. Claims 1-21 are allowed.

The following is an examiner's statement of reasons for allowance.

The prior art of record, taken alone or in combination fails to teach or suggest the following claimed features:

A method or a lister for generating source code listing from an object code sequence comprising program instructions, at least one of which having an associated relocation instruction denoting a link time modification of the original object code and its expressions/values, the method comprising: (i) reading the relocation instruction and deriving therefrom the expressions/values of the original object code sequence lost due to the link time modification; and (ii) generating the source code listing from which the object code at the location was derived via said relocation instruction as recited in claims 1 and 11; (iii) reading of the relocation instruction for determining an operand, operator, event and/or directive relocation type of relocation instruction and deriving therefrom the original object code sequence expressions/values to generate the source code listing derived from said relocation instruction type as recited in claims 20 and 21.

**Cahill** (USPN: 6,021,272) discloses reverse transforming of the object code using a platform-independent object format (PIOF), such PIOF being constructed from an ELF sections

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and relocation information; manipulating the object code to accommodate to specific operating system requirements; and using the PIOF to regenerate the assembly code. But Cahill does not teach or suggest generating listing of source code as in (ii) and deriving expressions/values of the original object code lost due to the link time modification as in (i); and determining relocation instruction type to derive said expressions/values as in (iii).

**Brooks** ( USPN: 5,819,097) discloses regenerating of assembly type of source code via an unlinker and a decompiling process enabling the unlinker to use information such as instruction table and symbol table, memory address readjustment of values, and tags values replacements, the tags being recorded at the creation of object code standing for some temporary address values in the object code data and being replaced using the symbol table with a concrete value at the unlinking time. With source code being here an assembly code, Brooks does not disclose or suggest listing of source code as required in (ii) based on (i); nor does Brooks disclose relocation type of relocation instruction as in (iii).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (272) 272-3735. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571)272-3719.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3735 ( for non-official correspondence – please consult Examiner before using) or 703-872-9306 ( for official correspondence) or redirected to customer service at 571-272-3609.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VAT  
December 13, 2004

*Kakali Chaki*

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